AMENDMENTS TO THE CLAIMS

1. (Currently Amended) Particle beam irradiation equipment comprising charged particle beam generation equipment and charged particle beam irradiation nozzle for irradiating a charged particle beam extracted from said charged particle beam generation equipment to an irradiation target,

wherein said charged particle beam irradiation nozzle comprises:

a first scatterer device including a first scatterer through which said charged particle beam passes;

a second scatterer device including a plurality of second scatterers through which said charged particle beam passes after having passed said first scatterer, said second scatterer device causing one of said plurality of second scatterers to be positioned in a passage region of said charged particle beam at one of plural different positions in the direction of travel of said charged particle beam; and

a collimator for shaping said charged particle beam,

one of said second scatterers which is positioned in said passage region at a first position in the direction of travel of said charged particle beam having a thickness different from that of another one of said second scatterers which is caused to be positioned in said passage region at a second position upstream of said first position in the direction of travel of said charged particle beam so as ~~being configured~~ to provide smaller scattering strength of said charged particle beam in a direction perpendicular to the direction of travel of said charged particle beam than said another one of said second scatterers ~~which is positioned in said passage region at a second position upstream of said first position in the direction of travel of said charged particle beam~~.

2. (Currently Amended) Particle beam irradiation equipment comprising charged particle beam generation equipment and a charged particle beam irradiation nozzle for irradiating a charged particle beam extracted from said charged particle beam generation equipment to an irradiation target,

wherein said charged particle beam irradiation nozzle comprises a first scatterer device including a first scatterer through which said charged particle beam passes, a second scatterer device including a plurality of second scatterers to be positioned in a passage region of said charged particle beam after having passed said first scatterer, and a collimator for shaping said charged particle beam; and

said particle beam irradiation equipment includes a control system for controlling said second scatterer device such that one of said plurality of second scatterers is positioned in said passage region at one of plural different positions in the direction of travel of said charged particle beam,

one of said second scatterers which is positioned in said passage region at a first position in the direction of travel of said charged particle beam having a thickness different from that of another one of said second scatterers which is caused to be positioned in said passage region at a second position upstream of said first position in the direction of travel of said charged particle beam so as ~~being configured~~ to provide smaller scattering strength of said charged particle beam in a direction perpendicular to the direction of travel of said charged particle beam than said another one of said second scatterers ~~which is positioned in said passage region at a second position upstream of said first position in the direction of travel of said charged particle beam~~.

3. (Original) Particle beam irradiation equipment according to Claim 2, wherein said control system places the one of said plurality of second scatterers at the one of the plural different positions selected based on treatment plan information.

4. (Original) Particle beam irradiation equipment according to Claim 3, wherein said treatment plan information is irradiation field information.

5. (Previously Presented) Particle beam irradiation equipment according to Claim 3, wherein said control system places, at the selected position, the one of said plurality of second scatterers selected based on another treatment plan information.

6. (Original) Particle beam irradiation equipment according to Claim 5, wherein said another treatment plan information is energy information of an ion beam.

7. (Previously Presented) Particle beam irradiation equipment according to Claim 26, further comprising a control system for controlling a selected one of said upstream second scatterer device and said downstream second scatterer device such that the second scatterer device is positioned in said passage region.

8. (Original) Particle beam irradiation equipment according to Claim 7, wherein said control system selects the one of said second scatterer devices based on treatment plan information.

9. (Original) Particle beam irradiation equipment according to Claim 7, wherein said upstream second scatterer device includes a first table for mounting said second scatterer thereon and positioning said second scatterer in said passage region, and said downstream second scatterer device includes a second table for mounting said another second scatterer thereon and positioning said another second scatterer in said passage region.

10. (Original) Particle beam irradiation equipment according to Claim 9, wherein said first table mounts said second scatterer in plural number thereon, said second table mounts said another second scatterer in plural number thereon, and said another second scatterer mounted in plural number on said second table provides smaller scattering strength of said charged particle beam in a direction perpendicular to the direction of travel of said charged particle beam than said second scatterer mounted in plural number on said first table.

11. (Original) Particle beam irradiation equipment according to Claim 9 or 10, wherein said charged particle beam irradiation nozzle further comprises a first table moving device for moving said first table in the direction perpendicular to the direction of

travel of said charged particle beam, and a second table moving device for moving said second table in the direction perpendicular to the direction of travel of said charged particle beam; and

said control system controls the table moving device included in the selected second scatterer device, thereby controlling movement of the corresponding table such that the corresponding second scatterer is positioned said passage region.

12. (Currently Amended) Particle beam irradiation equipment comprising charged particle beam generation equipment and a charged particle beam irradiation nozzle for irradiating a charged particle beam extracted from said charged particle beam generation equipment to an irradiation target,

wherein said charged particle beam irradiation nozzle comprises:

a first scatterer through which said charged particle beam passes;

a first table disposed downstream of said first scatterer in the direction of travel of said charged particle beam and mounting a second scatterer, wherein said first table is to be positioned in a passage region of said charged particle beam;

a second table disposed downstream of said first table in the direction of travel of said charged particle beam and mounting another second scatterer, wherein said second table is to be positioned in said passage region, said another second scatterer mounted on said second table having a thickness different from that of said second scatterer mounted on said first table so as to provide ~~which provides~~ smaller scattering strength of said charged particle beam in the direction perpendicular to the direction of travel of said charged particle beam than said second scatterer mounted on said first table; and

a collimator for shaping said charged particle beam.

13. (Original) Particle beam irradiation equipment according to Claim 12, wherein said first scatterer is movable within said charged particle beam irradiation nozzle in the direction of travel of said charged particle beam.

14. (Original) Particle beam irradiation equipment according to Claim 13, further comprising a first scatterer moving device for moving said first scatterer in the direction of travel of said charged particle beam, and a first scatterer control device for controlling said first scatterer moving device, thereby controlling an amount by which said first scatterer is to be moved.

15. (Previously Presented) Particle beam irradiation equipment according to Claim 12, wherein said first table and said second table are capable of placing respectively said second scatterer and said another second scatterer in said passage region.

16. (Original) Particle beam irradiation equipment according to Claim 15, further comprising a first table moving device for moving said first table in the direction perpendicular to the direction of travel of said charged particle beam, a second table moving device for moving said second table in the direction perpendicular to the direction of travel of said charged particle beam, and a table control device for controlling the table moving device to move a selected one of said first and second tables, thereby controlling movement of the selected table.

17. (Currently Amended) Particle beam irradiation equipment comprising charged particle beam generation equipment and a charged particle beam irradiation nozzle for irradiating a charged particle beam extracted from said charged particle beam generation equipment to an irradiation target,

wherein said charged particle beam irradiation nozzle comprises:

a first scatterer device including a first scatterer through which said charged particle beam passes;

a second scatterer device including a plurality of second scatterers to be positioned in a passage region of said charged particle beam after having passed said first scatterer, said second scatterer device being movably disposed in the direction of travel of said charged particle beam; and

a collimator for shaping said charged particle beam,

said plurality of second scatterers comprising a second scatterer to be positioned in said passage region of the charged particle beam at the first position included in plural different positions in the direction of travel of said charged particle beam, and another second scatterer to be positioned in said passage region at a second position downstream of said first position included in said plural different positions,

said another second scatterer positioned in said passage region at said second position having a thickness different from that of said second scatterer caused to be positioned in said passage region at said first position as ~~being configured~~ to provide smaller scattering strength of said charged particle beam in a direction perpendicular to the direction of travel of said charged particle beam than said second scatterer positioned in said passage region at said first position.

18. (Original) Particle beam irradiation equipment according to Claim 17, further comprising a second scatterer moving device for moving said second scatterer device in the direction of travel of said charged particle beam, and a second scatterer control device for controlling said second scatterer moving device, thereby controlling an amount by which said second scatterer device is to be moved.

19. (Previously Presented) Particle beam irradiation equipment according to any of Claim 1, 7 and 17 and 26, wherein said first scatterer device is movable in the direction of travel of said charged particle beam.

20. (Original) Particle beam irradiation equipment according to Claim 19, further comprising a first scatterer moving device for moving said first scatterer device in the direction of travel of said particle beam, and a first scatterer control device for controlling said first scatterer moving device, thereby controlling an amount by which said first scatterer device is to be moved.

21. (Previously Presented) Particle beam irradiation equipment according to Claim 17, wherein said second scatterer device comprises a table for positioning said second scatterer in said passage region, and a table moving device for moving said table in the direction perpendicular to the direction of travel of said charged particle beam.

22. (Original) Particle beam irradiation equipment according to Claim 21, further comprising a table control device for controlling said table moving device, thereby controlling movement of said table.

23. (Currently Amended) A particle beam irradiation method using a charged particle beam irradiation nozzle comprising a first scatterer through which a charge particle beam passes, a plurality of second scatterers through which said charged particle beam passes after having passed said first scatterer, said plurality of second scatterers comprising a second scatterer to be positioned in a passage region of said charged particle beam at a first position included in plural different positions in the direction of travel of said charged particle beam, and another second scatterer to be positioned in said passage region at a second position downstream of said first position included in said plural different positions, and a collimator for shaping said charged particle beam, said another second scatterer positioned in said passage region at said second position having a thickness different from that of said second scatterers caused to be positioned in said passage region at said first position so as ~~being configured~~ to provide smaller scattering strength of said charged particle beam in a direction perpendicular to the direction of travel of said charged particle beam than said second scatterer positioned in said passage region at said first position; comprising the steps of:

placing one of said second scatterers in said passage region of said charged particle beam at a selected one of said plural different positions; and

irradiating said charged particle beam after having passed said first scatterer and said second scatterer positioned at said selected position.

24. (Original) A particle beam irradiation method according to Claim 23, wherein said first scatterer is moved in the direction of travel of said charged particle beam.

25. (Original) A particle beam irradiation method according to Claim 23, wherein said second scatterer is placed at said selected position by moving said second scatterer in the direction of travel of said charged particle beam.

26. (Currently Amended) Particle beam irradiation equipment comprising charged particle beam generation equipment and a charged particle beam irradiation nozzle for irradiating a charged particle beam extracted from said charged particle beam generation equipment to an irradiation target,

wherein said charged particle beam irradiation nozzle comprises a first scatterer device including a first scatterer through which said charged particle beam passes, an upstream second scatterer device including a second scatterer to be positioned in a passage region of said charged particle beam at a first position downstream of said first scatterer device in the direction of travel of said charged particle beam, a downstream second scatterer device including another second scatterer to be positioned in said passage region at a second position downstream of said first position in the direction of travel of said charged particle beam; and a collimator for shaping said charged particle beam; and

said second scatterer of said downstream second scatterer device <u>having a thickness different from that of said second scatterer of said upstream second scatterer device so as</u> ~~being configured~~ to provide smaller scattering strength of said charged particle beam in a direction perpendicular to the direction of travel of said charged particle beam than said charged particle beam than said second direction perpendicular to the direction of travel of said charged particle beam than said second scatterer of said upstream second scatterer device.

27. (Currently Amended) A method of adjusting a charged particle beam irradiation nozzle comprising a first scatterer through which a charged particle beam passes, a plurality of second scatterers through which said charged particle beam passes after having passed said first scatterer, said plurality of second scatterers comprising a second scatterer to position in a passage region of said charged particle beam at a first position included in plural different positions in the direction of travel of said charged particle beam, and another second scatterer to be positioned in said passage region at a second position downstream of said first position included in said plural different positions, and a collimator for shaping said charged particle beam, said another second scatterer to be positioned in said passage region at said second position having a thickness different from that of said second scatterer caused to be positioned in said passage region at said first position so as ~~being configured~~ to provide smaller scattering strength of said charged particle beam in a direction perpendicular to the direction of travel of said charged particle beam than said second scatterer positioned in said passage region at said first position; comprising the steps of:

placing one of said plurality of second scatterers in said passage region at one of said plural different positions in the direction of travel of said charged particle beam.

28. (Currently Amended) A method of adjusting a charged particle beam irradiation nozzle comprising a first scatterer through which a charged particle beam passes, a plurality of second scatterers through which said charged particle beam passes after having passed said first scatterer, said plurality of second scatterers comprising a second scatterer to be positioned in a passage region of said charged particle beam at a first position included in plural different positions in the direction of travel of said charged particle beam, and another second scatterer to be positioned in said passage region at a second position downstream of said one position included in said plural different positions, and a collimator for shaping said charged particle beam, said another second scatterer to be positioned in said passage region at said second

position having a thickness different from that of said second scatterer caused to position in said passage region at said one position so as ~~being configured~~ to provide smaller scattering strength of said charged particle beam in a direction perpendicular to the direction of travel of said charged particle beam than said second scatterer positioned in said passage region at said first position; comprising the steps of:

selecting one of said plurality of second scatterers, and placing the selected second scatterer in said passage region at a selected one of said plural different positions in the direction of travel of said charged particle beam.

29. (Previously Presented) A method of adjusting a charged particle beam irradiation nozzle according to Claim 28, wherein said placing of the selected second scatterer at said selected position is carried out by placing in said passage region the second scatterer included in one of an upstream second scatterer device including said second scatterer to be positioned at said first position downstream of said first scatterer in the direction of travel of said charged particle beam, and a downstream second scatterer device including said another second scatterer to be positioned in said another position downstream of said upstream second scatterer device.

30. (Previously Presented) A method of adjusting a charged particle beam irradiation nozzle according to claim 28, wherein said placing of the selected second scatterer at said selected position is carried out by moving said second scatterer in the direction of travel of said charged particle beam.